



FIG. 1

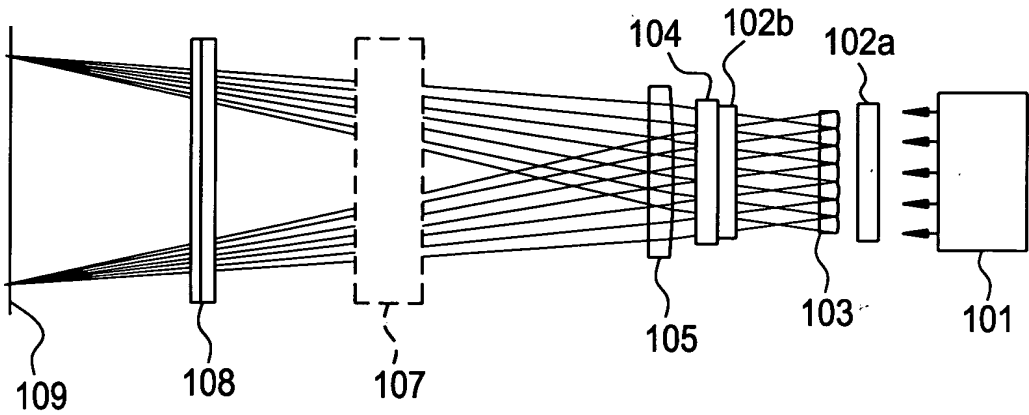
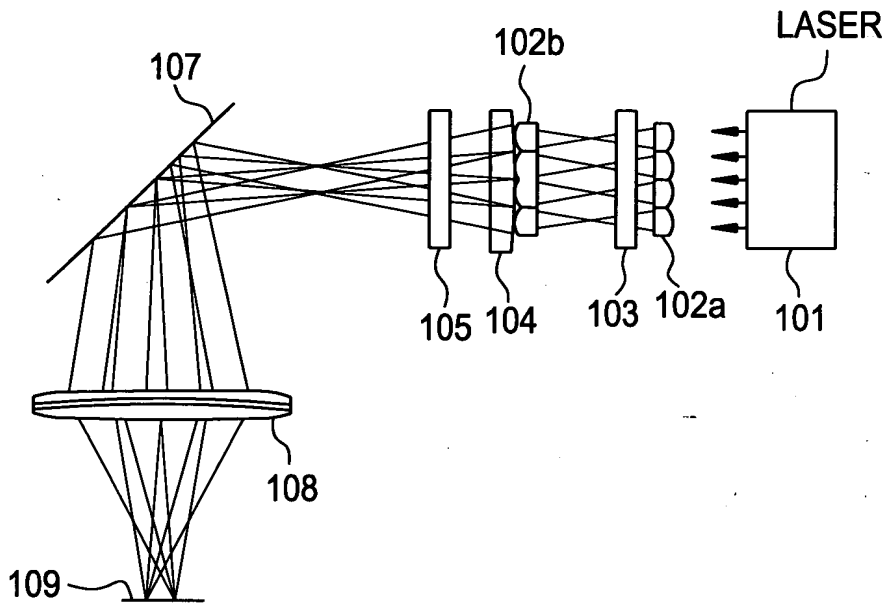


FIG. 2

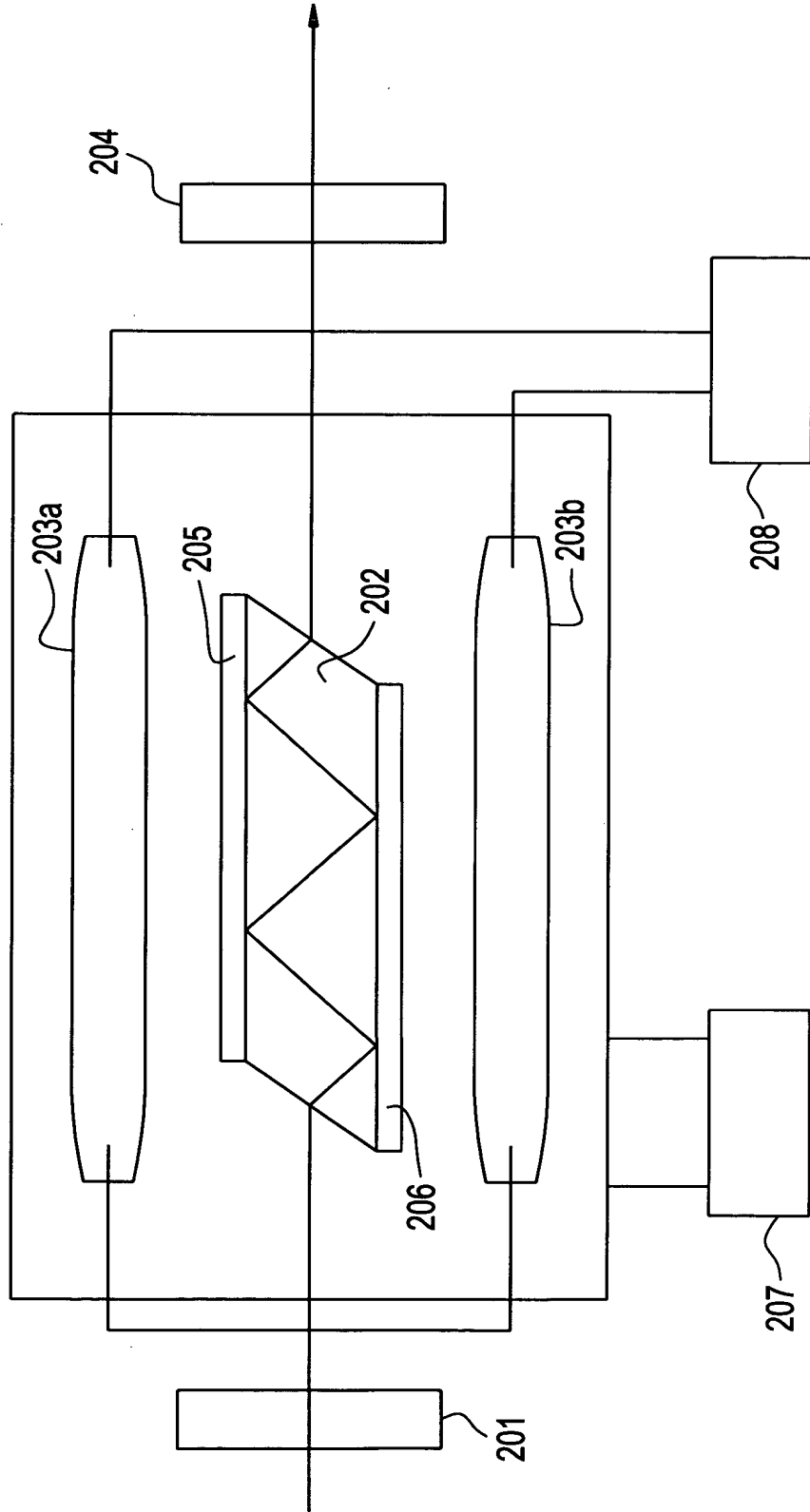


FIG. 3A

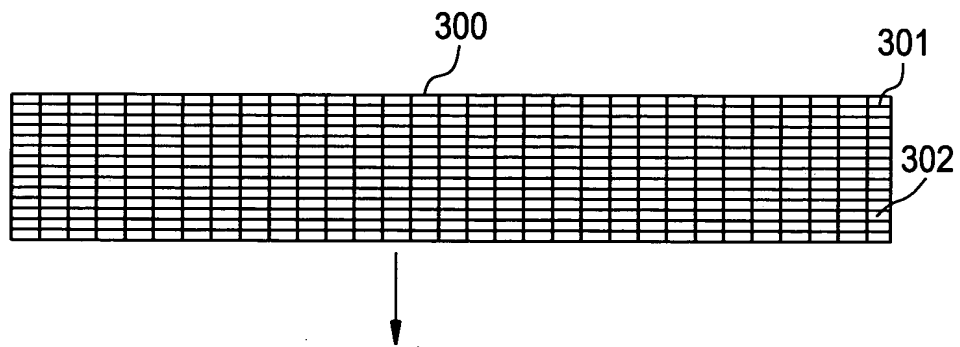


FIG. 3B

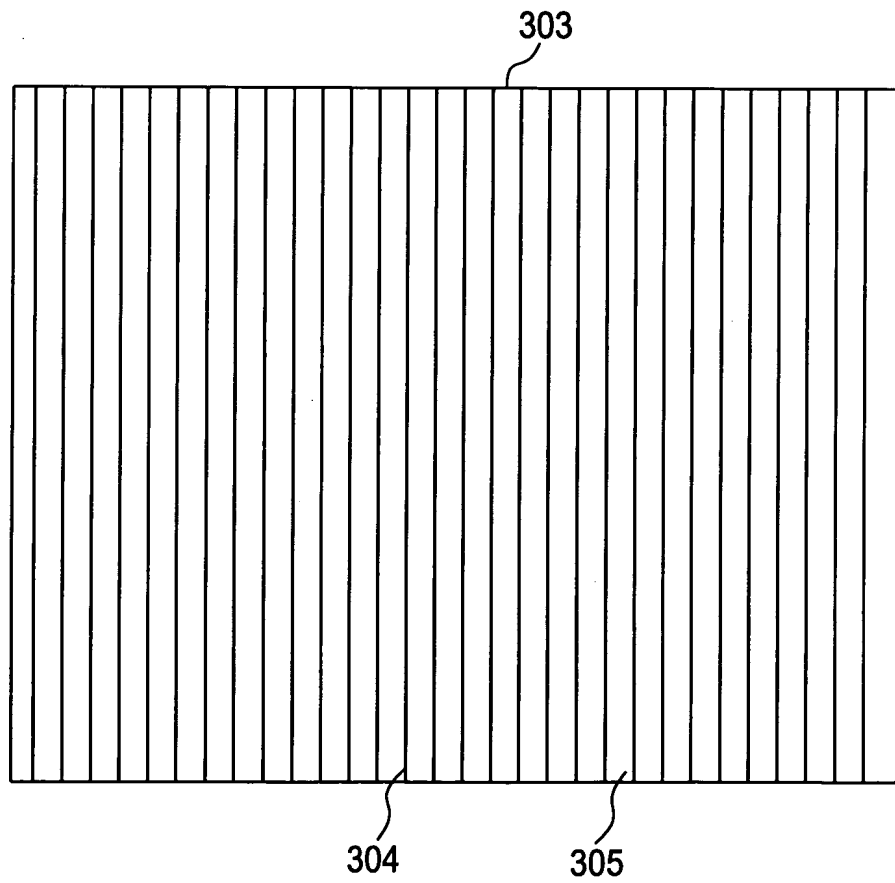


FIG. 4A

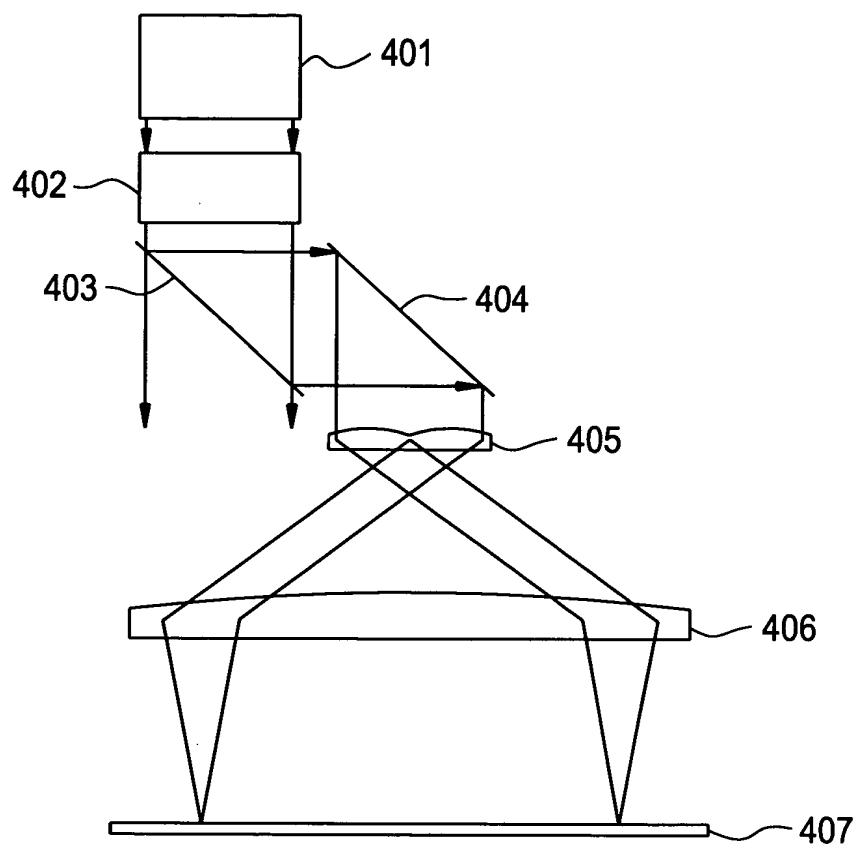


FIG. 4B

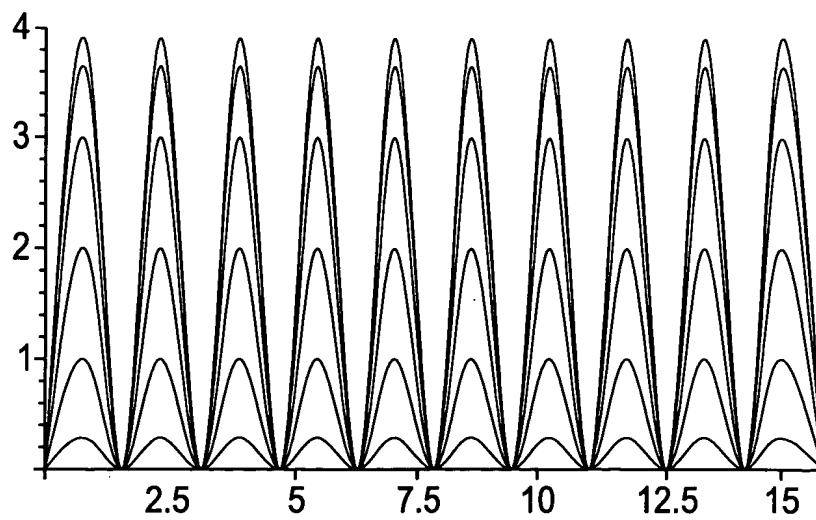


FIG. 5A

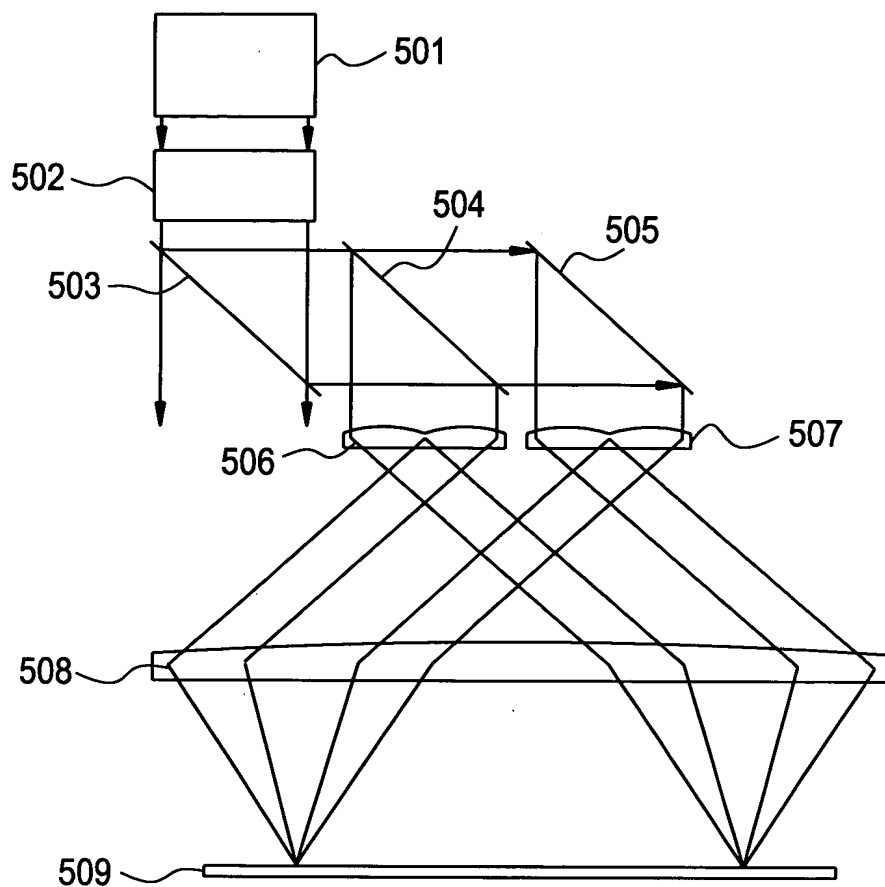


FIG. 5B

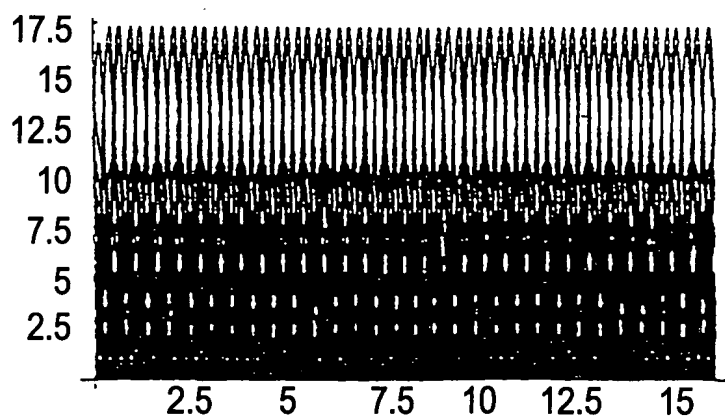


FIG. 6

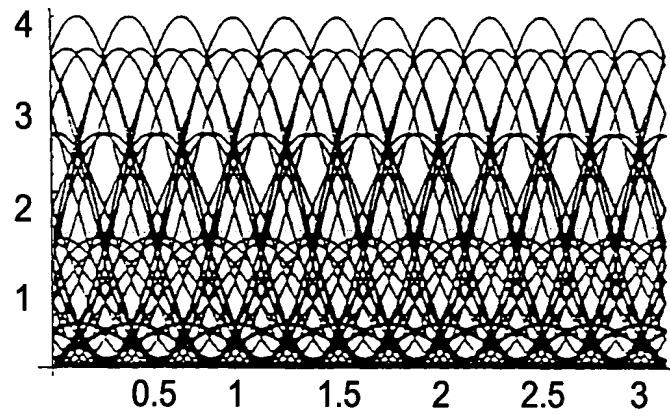


FIG. 7

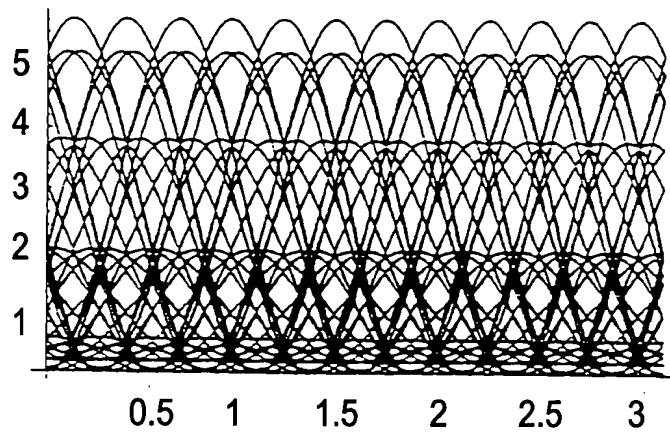


FIG. 8

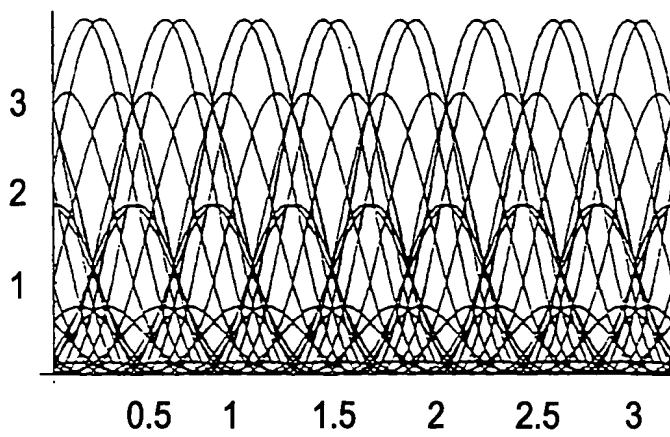


FIG. 9

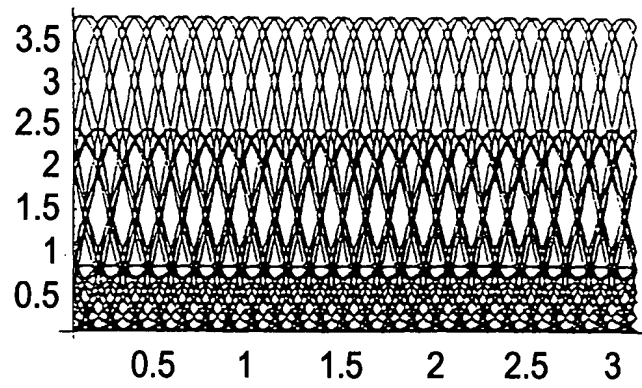


FIG. 10

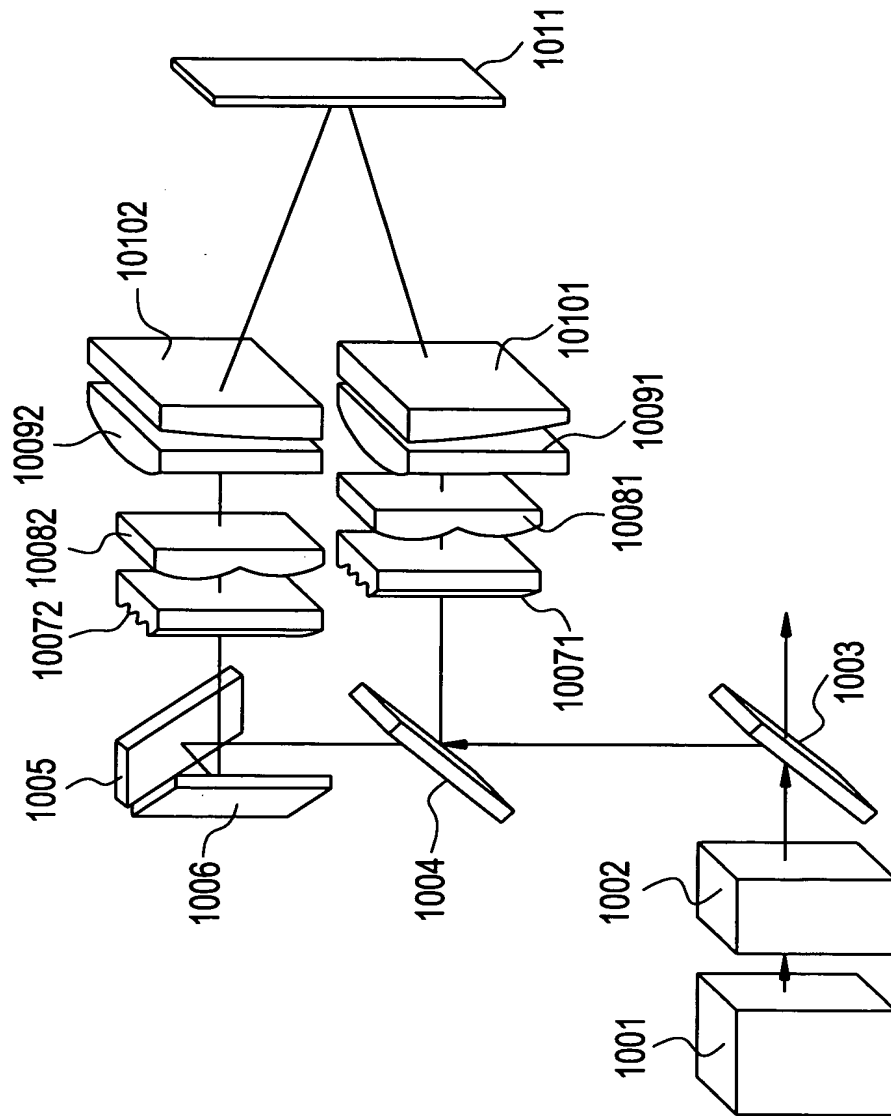


FIG. 11

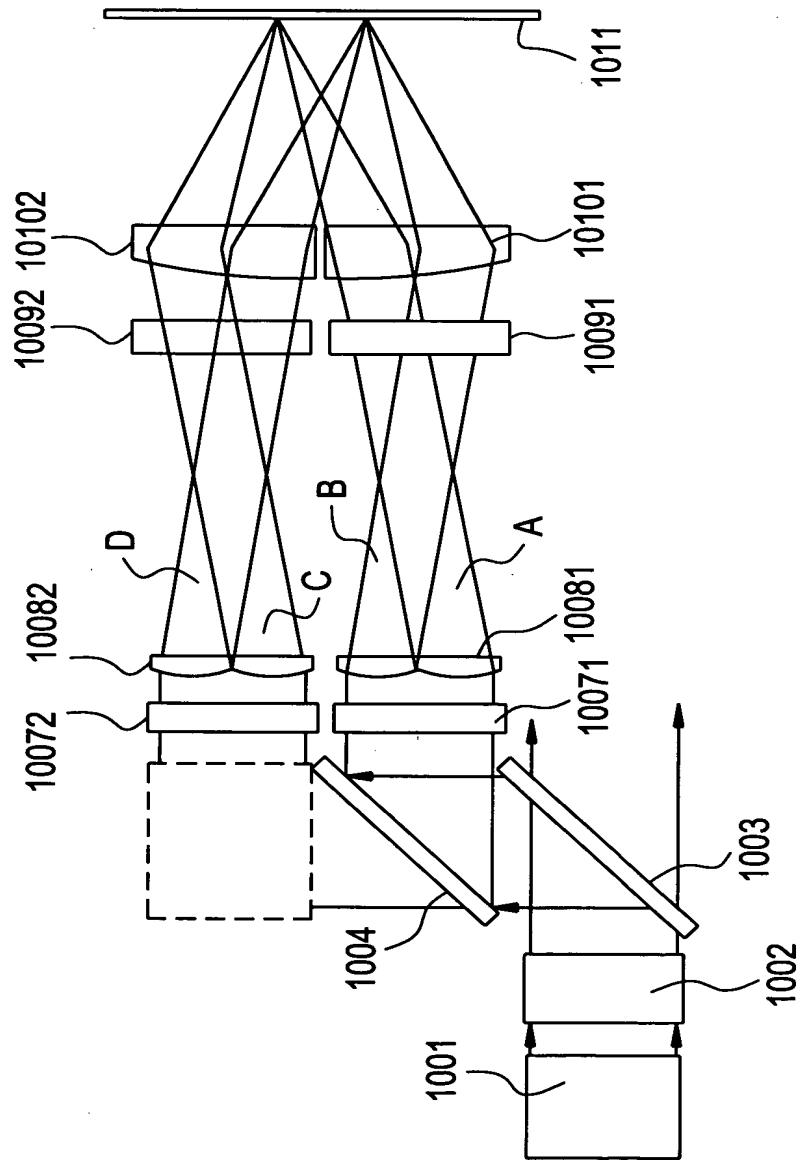


FIG. 12A

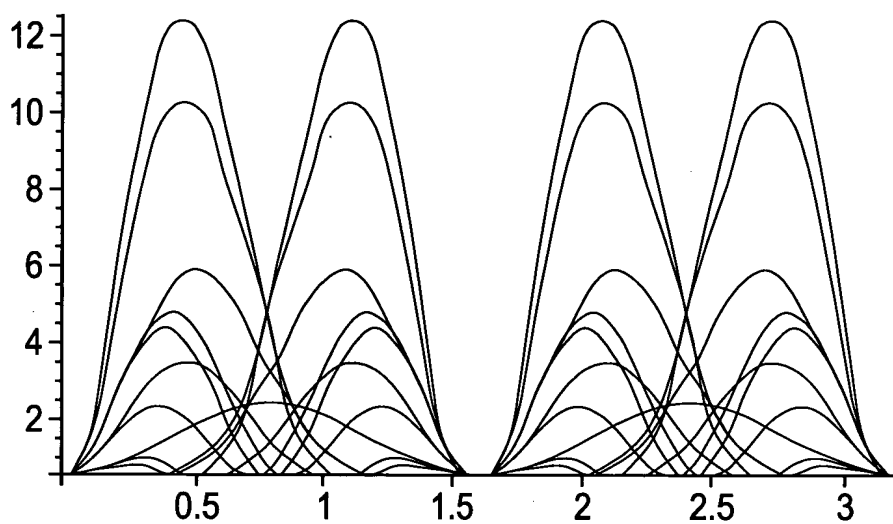


FIG. 12B

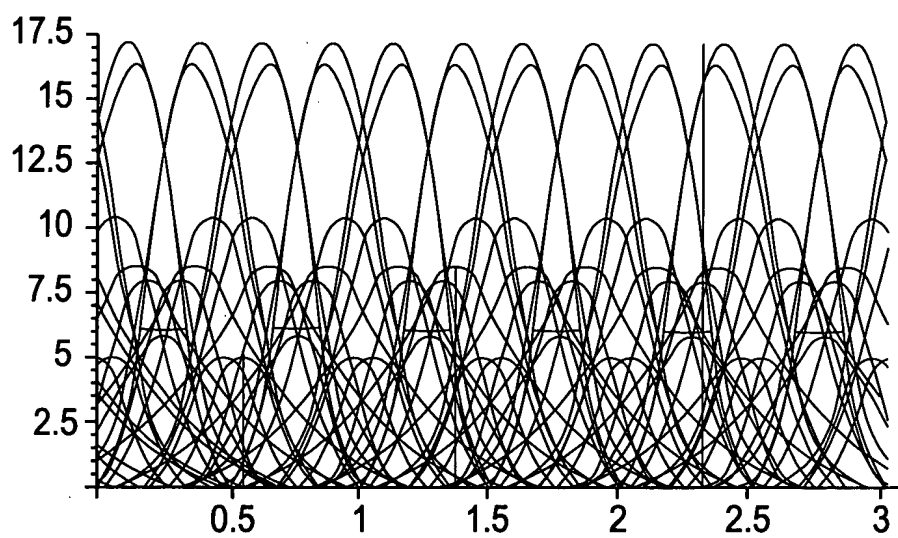


FIG. 13

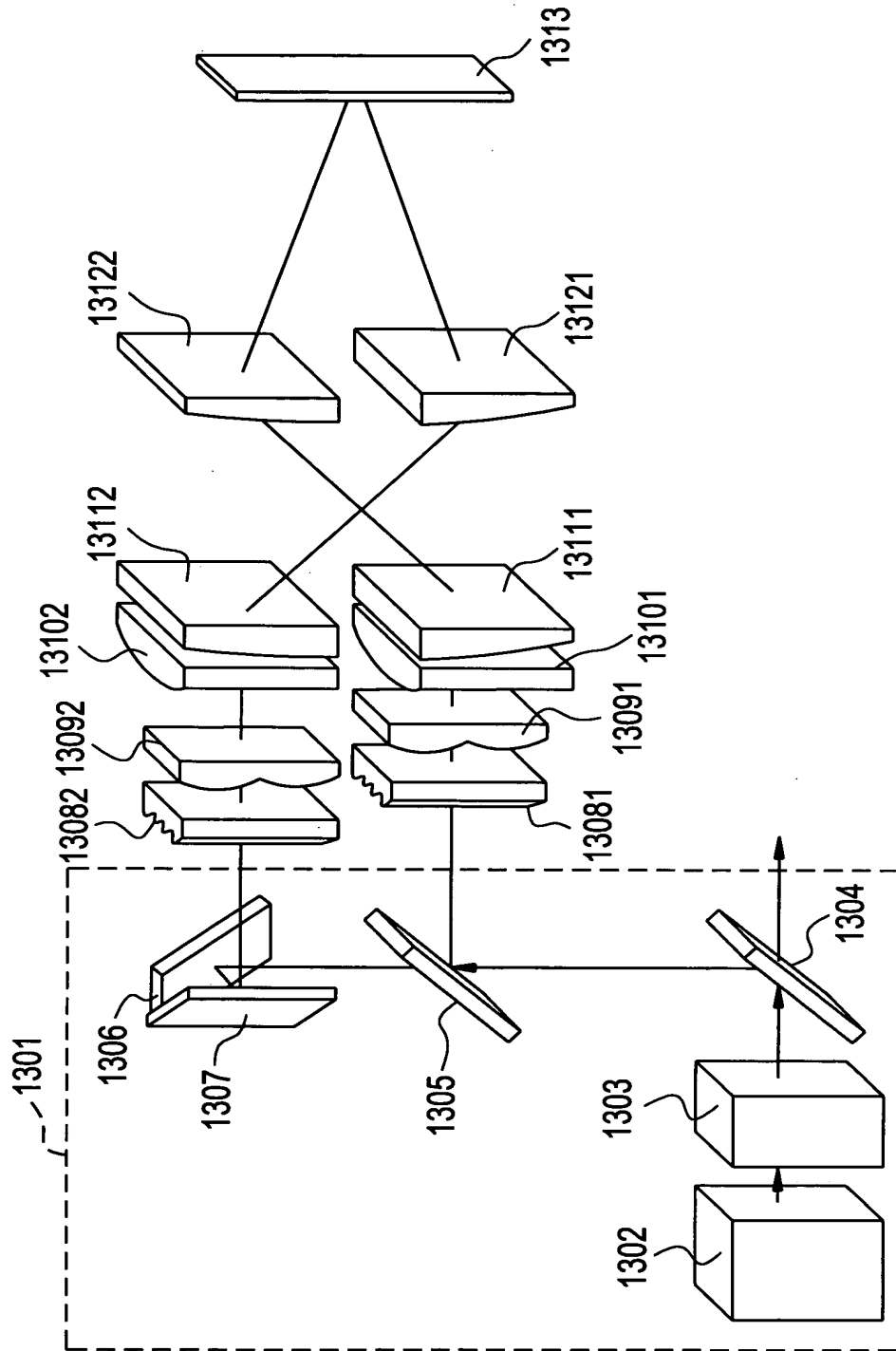


FIG. 14

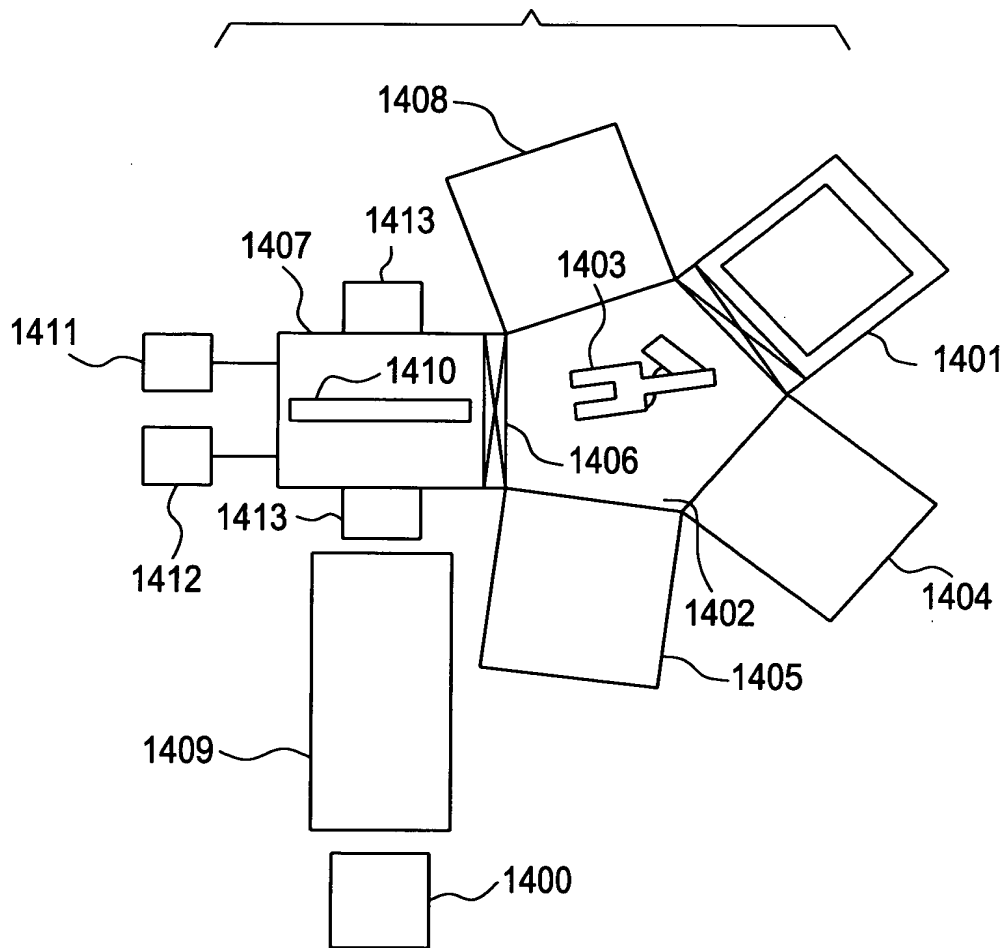


FIG. 15A
STEP OF FORMING AMORPHOUS SEMICONDUCTOR FILM

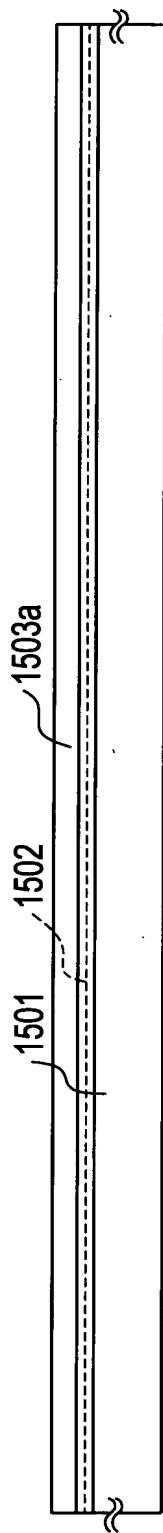
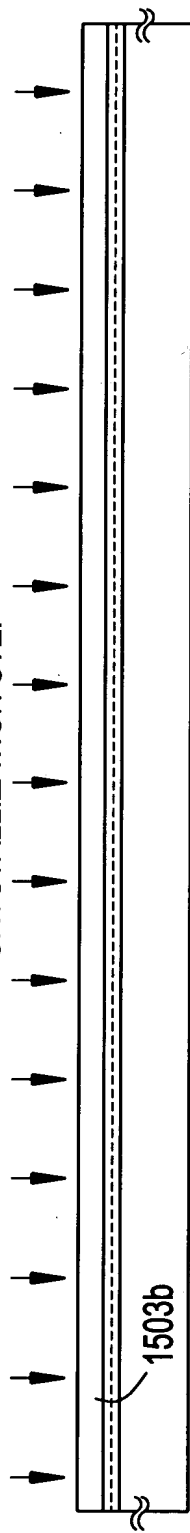


FIG. 15B
CRYSTALLIZATION STEP



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FIG. 15C
STEP OF FORMING MASK LAYER

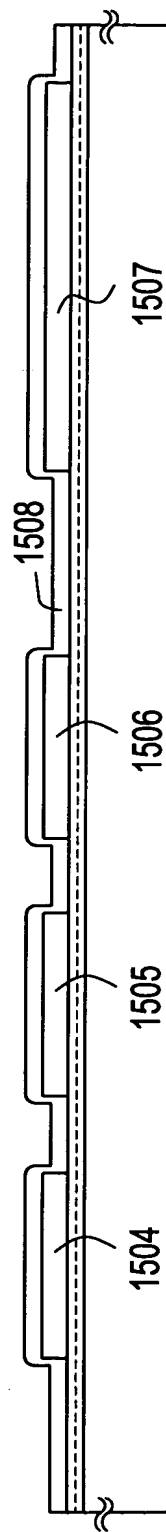
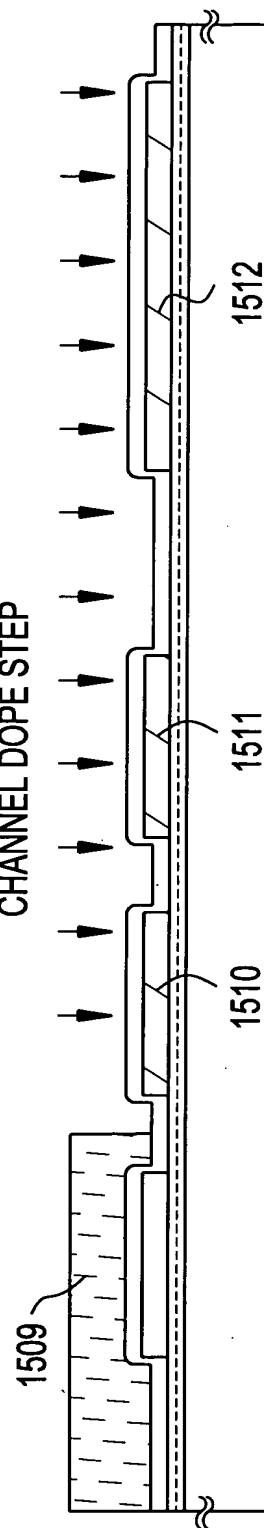


FIG. 15D
CHANNEL DOPE STEP



A cross-sectional view of a multi-layered structure, labeled 1520. The structure consists of a central core with a dashed line running through its center. The core is flanked by two layers of material, each containing a series of rectangular blocks. The blocks in the left layer are filled with diagonal hatching, while the blocks in the right layer are empty. The entire structure is enclosed within a thin outer boundary. Break symbols (two parallel wavy lines) are shown at both ends of the structure, indicating that it extends beyond the shown boundaries.

A cross-sectional view of a multi-layered structure 1521. The structure consists of a top layer 1522, which is a thin, hatched layer. Below this layer is a series of alternating layers: a layer with diagonal hatching, followed by a layer with a dotted pattern, and then a layer with a cross-hatch pattern. These layers are stacked vertically, with the top layer 1522 being the uppermost layer. The entire structure is labeled 1521.

This cross-sectional view shows a semiconductor device with a substrate 1523. Above the substrate, there are several layers and regions. A layer 1528 is shown with regions 1528a and 1528b. Above this is a layer 1524 with regions 1529a and 1529b. A layer 1525 is shown with regions 1530a and 1530b. A layer 1530 is shown with regions 1531a and 1531b. A layer 1531 is shown with regions 1526 and 1532a. A layer 1532 is shown with regions 1527 and 1532b. The device is shown with a top surface and a bottom surface, and a dashed line indicates a cross-section through the device.

FIG. 16D
STEP OF FORMING
GATE ELECTRODE

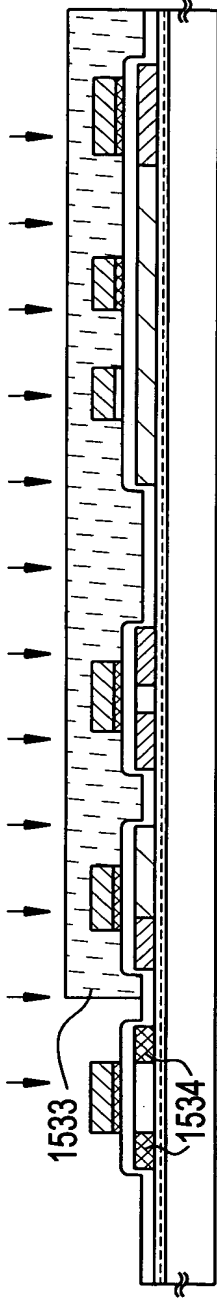


FIG. 17A
P⁺⁺ DOPE STEP

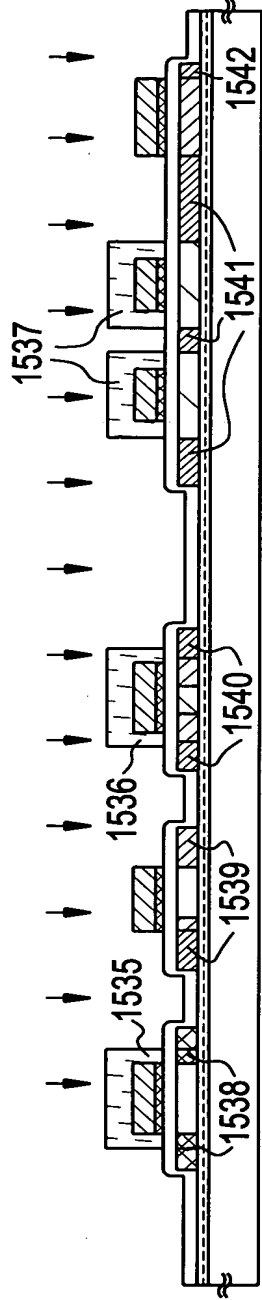


FIG. 17B
n⁺ DOPE STEP

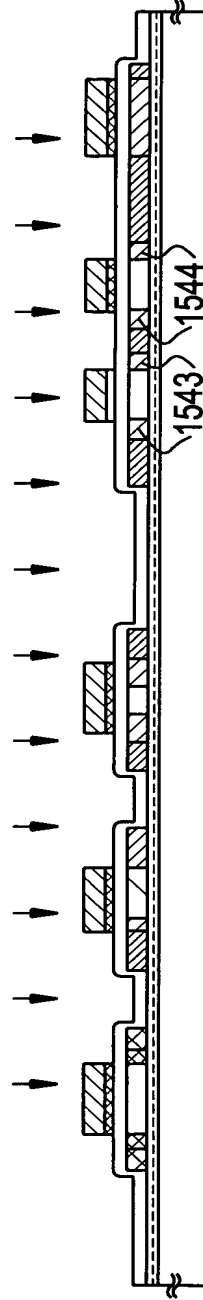


FIG. 17C
n⁻ DOPE STEP

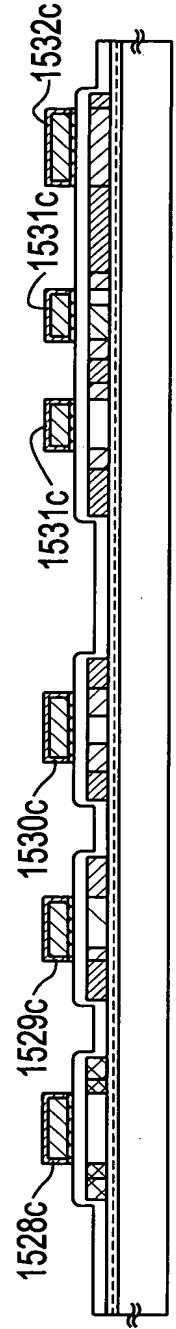


FIG. 18D
ACTIVATION STEP/
INTRUDING STEP/
HYDROGENATING STEP

FIG. 18A

STEP OF FORMING SECOND CONDUCTIVE FILM

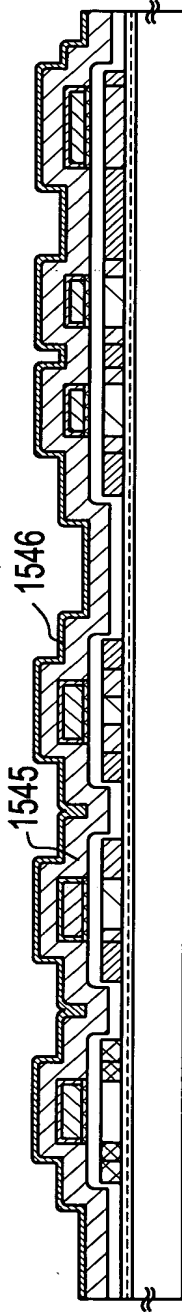


FIG. 18B

FORMATION OF GATE WIRING

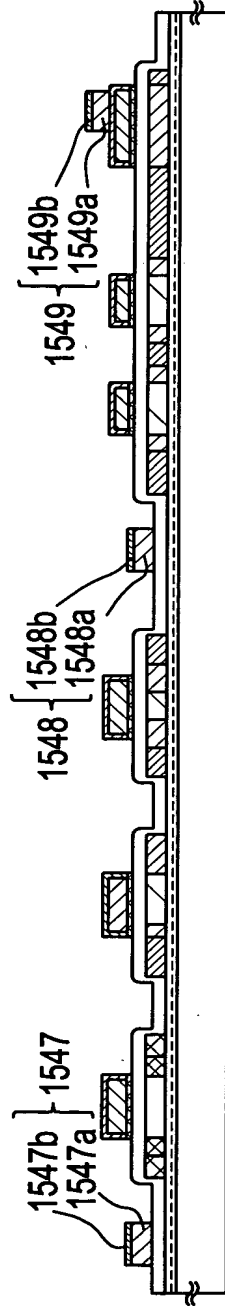


FIG. 18C

STEP OF FORMING INTERLAYER INSULATING FILM/ STEP OF FORMING CONTACT HOLE/
STEP OF FORMING WIRING/ STEP OF FORMING PASSIVATION FILM

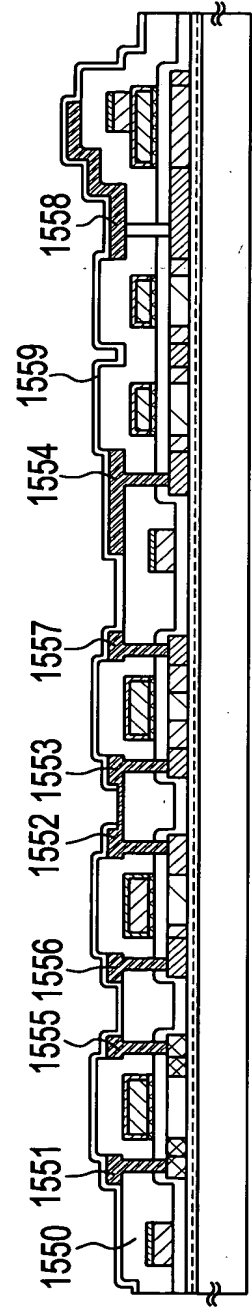


FIG. 19

STEP OF FORMING RESIN FILM/ STEP OF FORMING CONTACT HOLE/
STEP OF FORMING PIXEL ELECTRODE

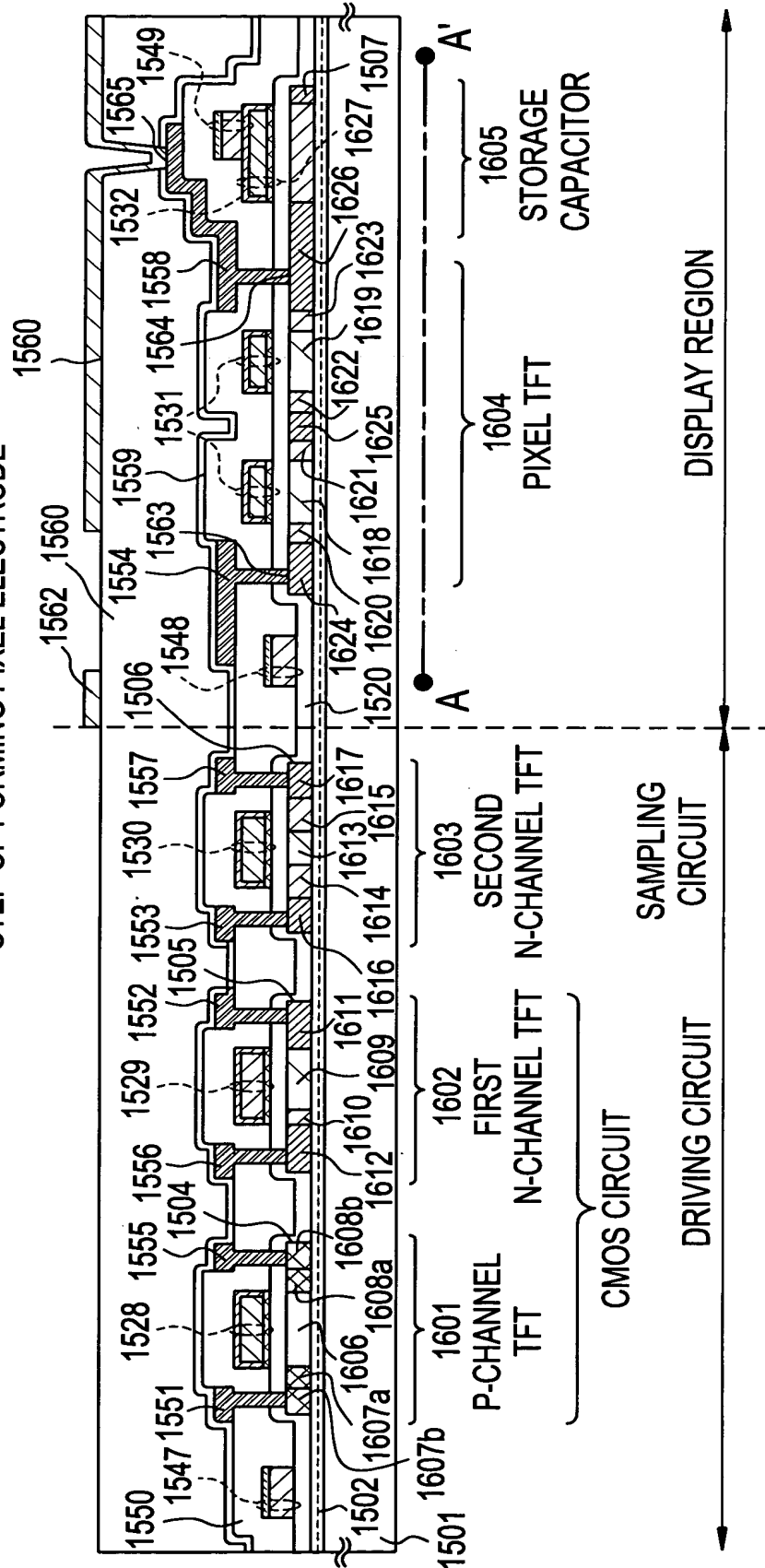


FIG. 20

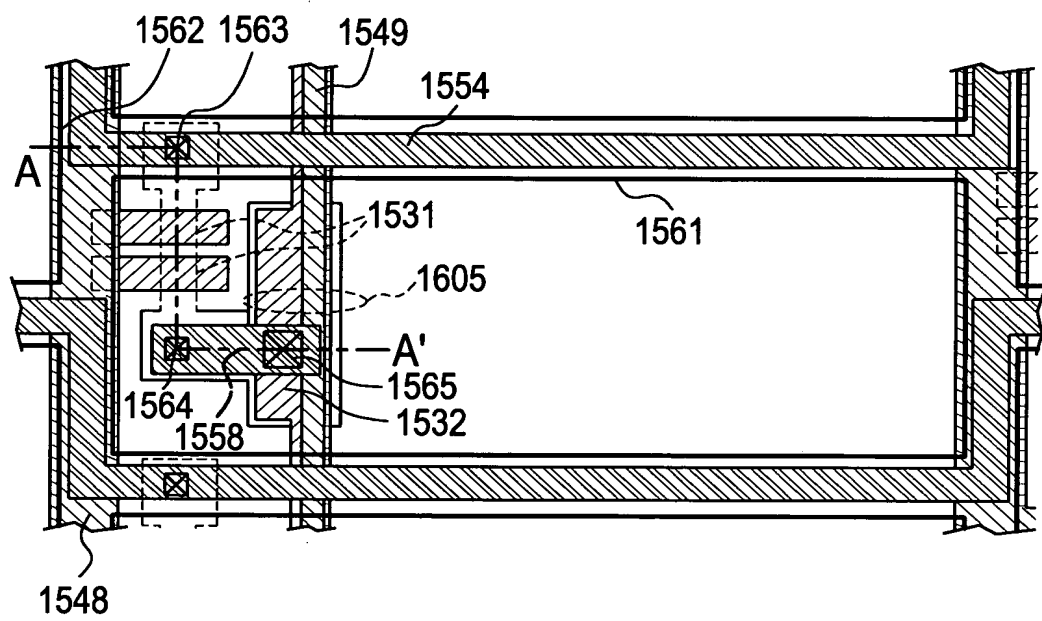


FIG. 21

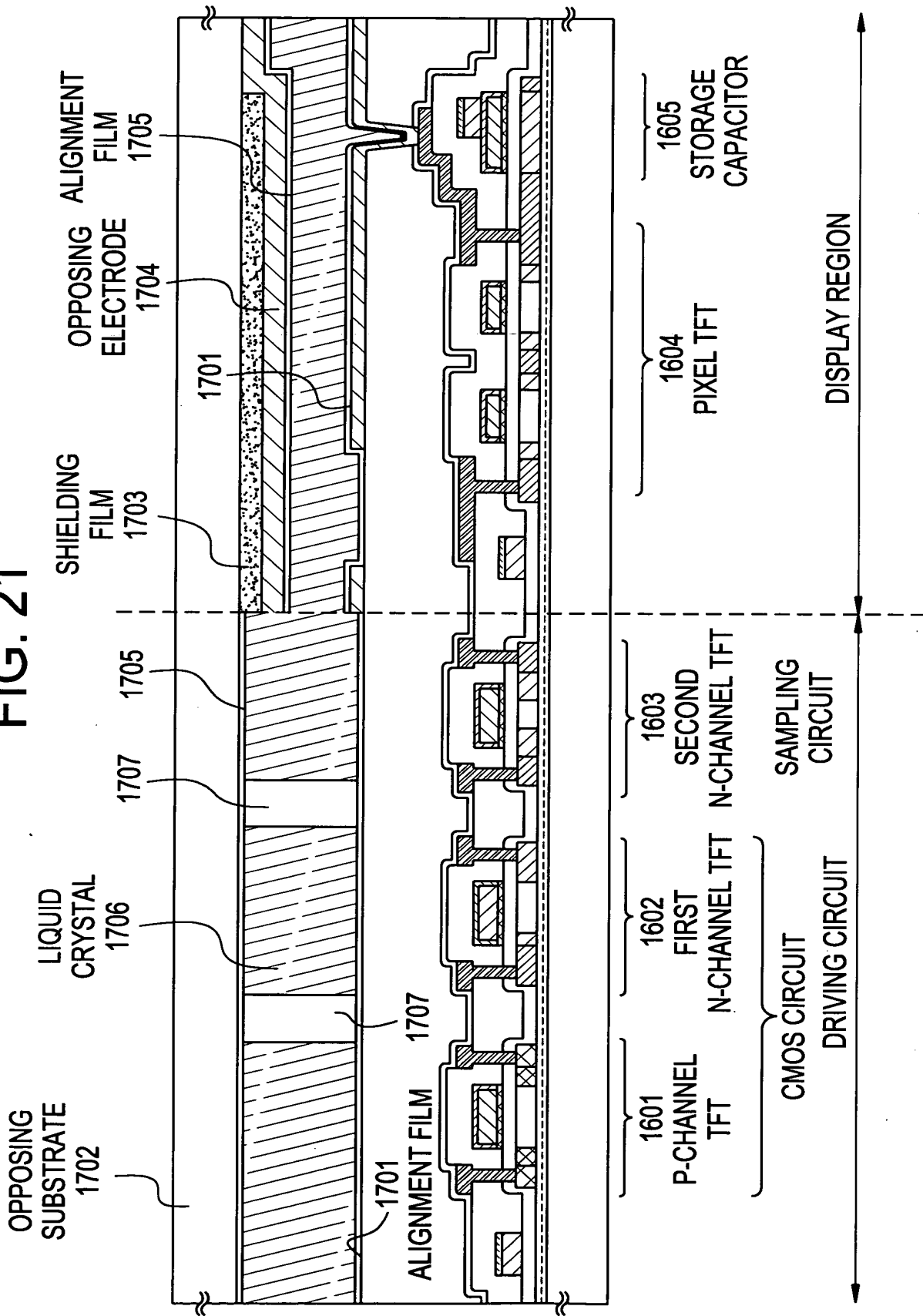
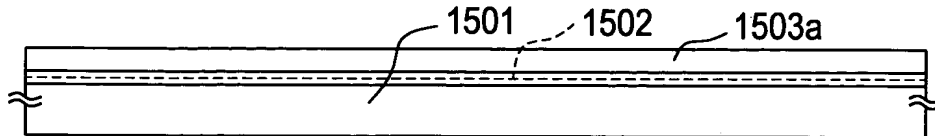
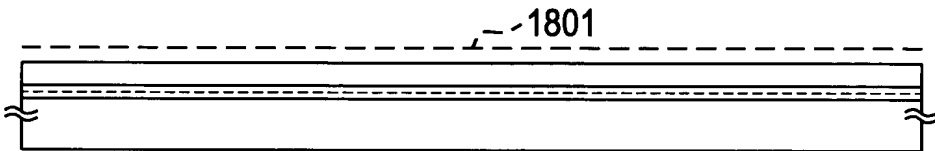


FIG. 22A

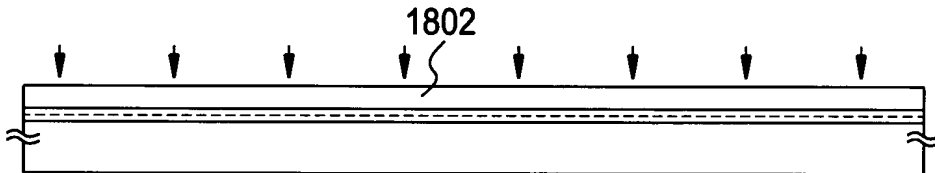
STEP OF FORMING AMORPHOUS SEMICONDUCTOR FILM

**FIG. 22B**

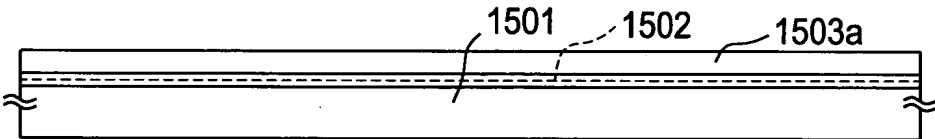
STEP OF ADDING CATALYST ELEMENT

**FIG. 22C**

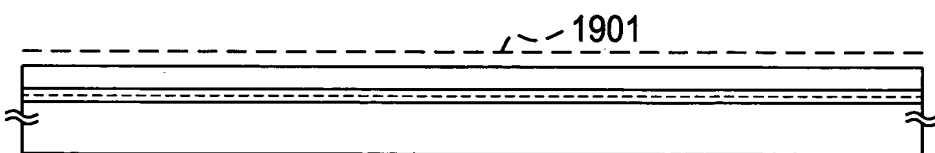
LASER CRYSTALLIZATION STEP

**FIG. 23A**

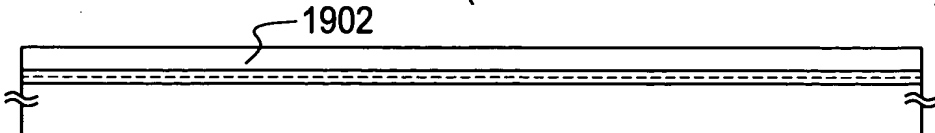
STEP OF FORMING AMORPHOUS SEMICONDUCTOR FILM

**FIG. 23B**

STEP OF ADDING CATALYST ELEMENT

**FIG. 23C**

CRYSTALLIZATION STEP (THERMAL CRYSTALLIZATION)

**FIG. 23D**

LASER ANNEAL STEP

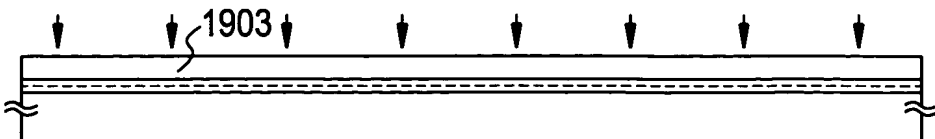


FIG. 24

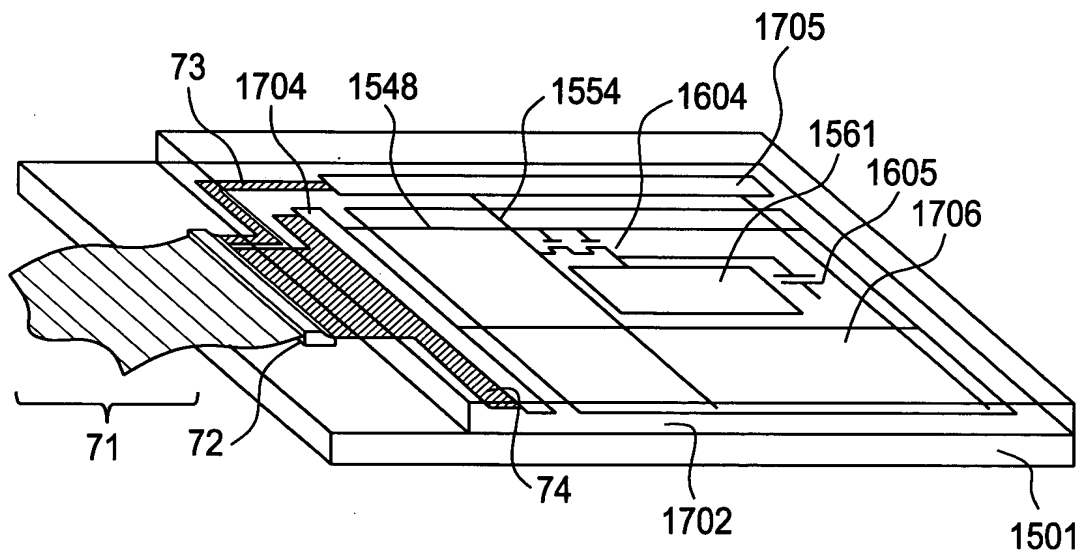


FIG. 25A

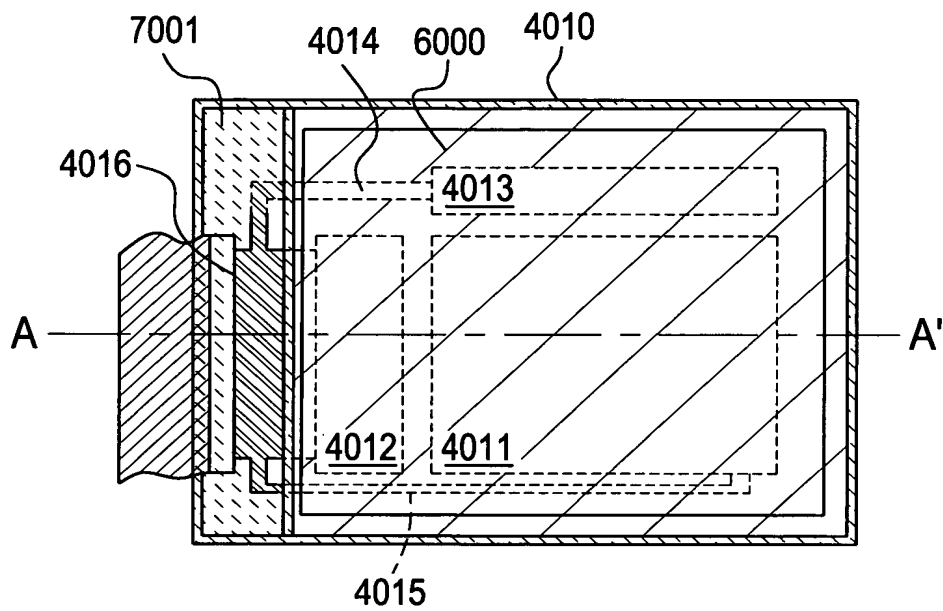


FIG. 25B

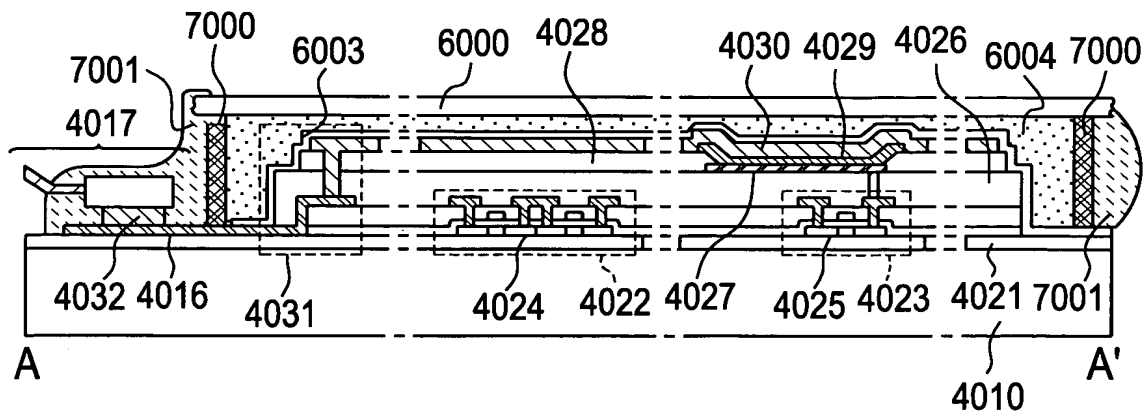


FIG. 26A

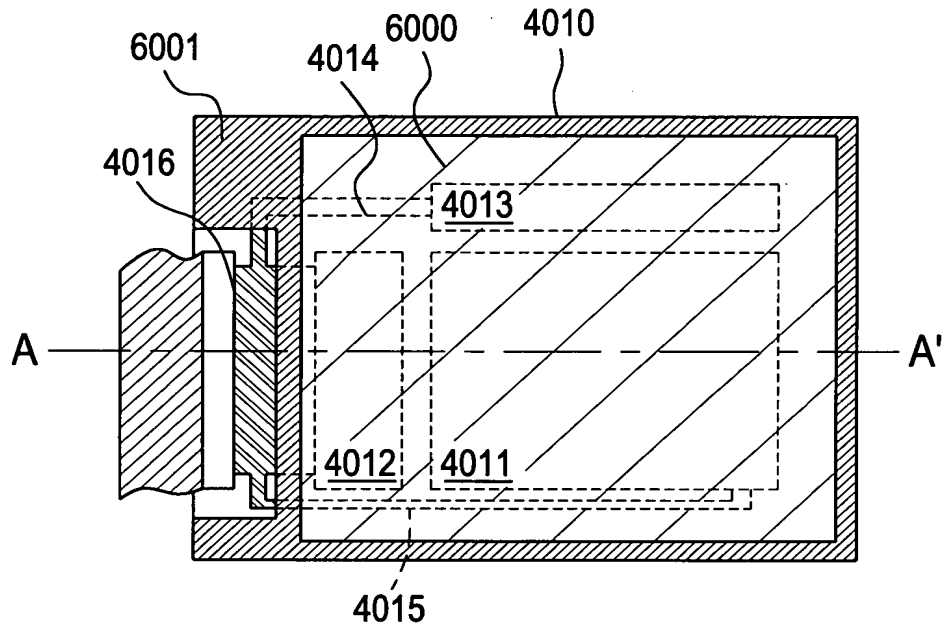


FIG. 26B

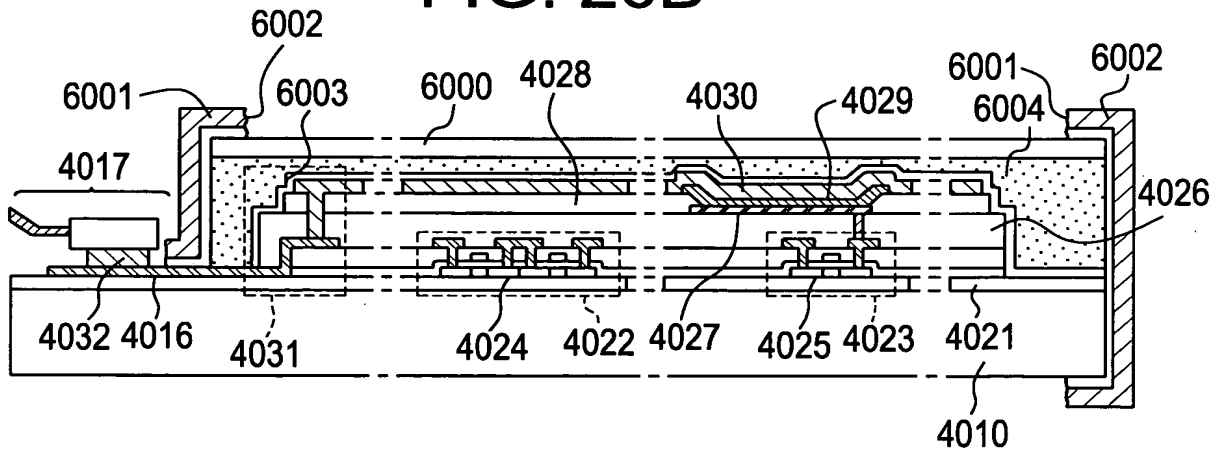


FIG. 27

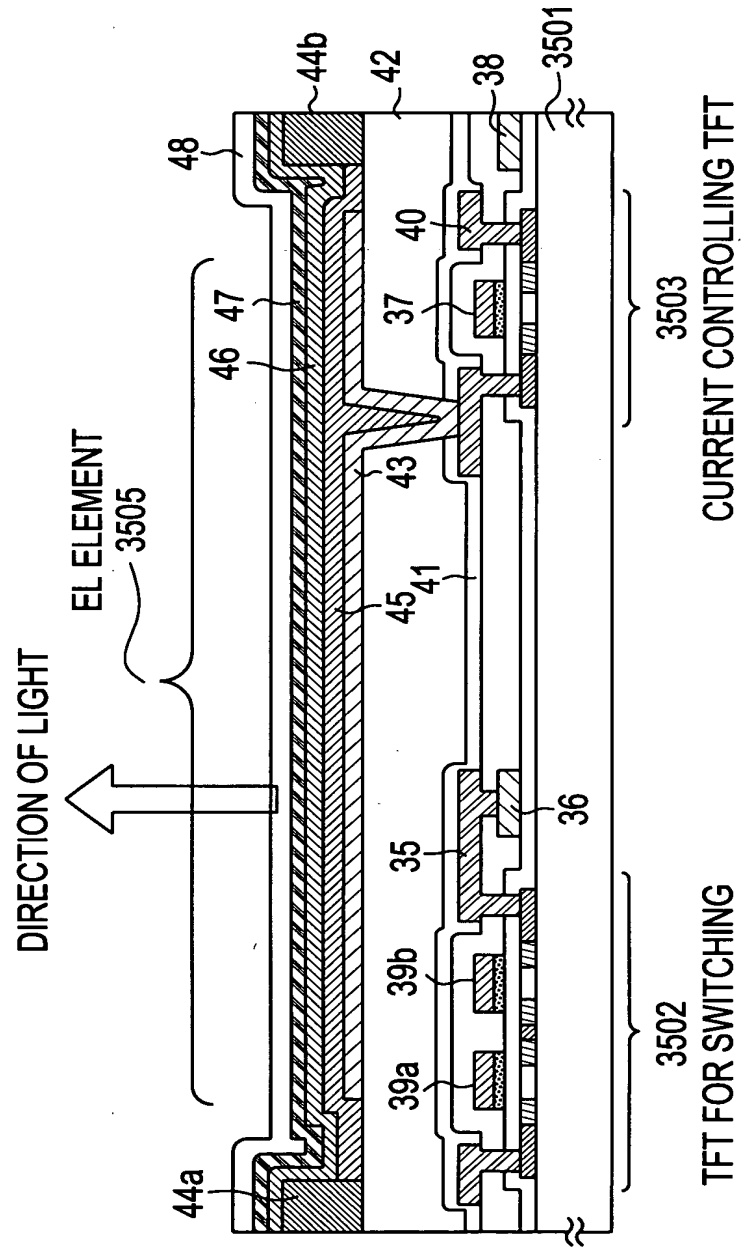


FIG. 28A

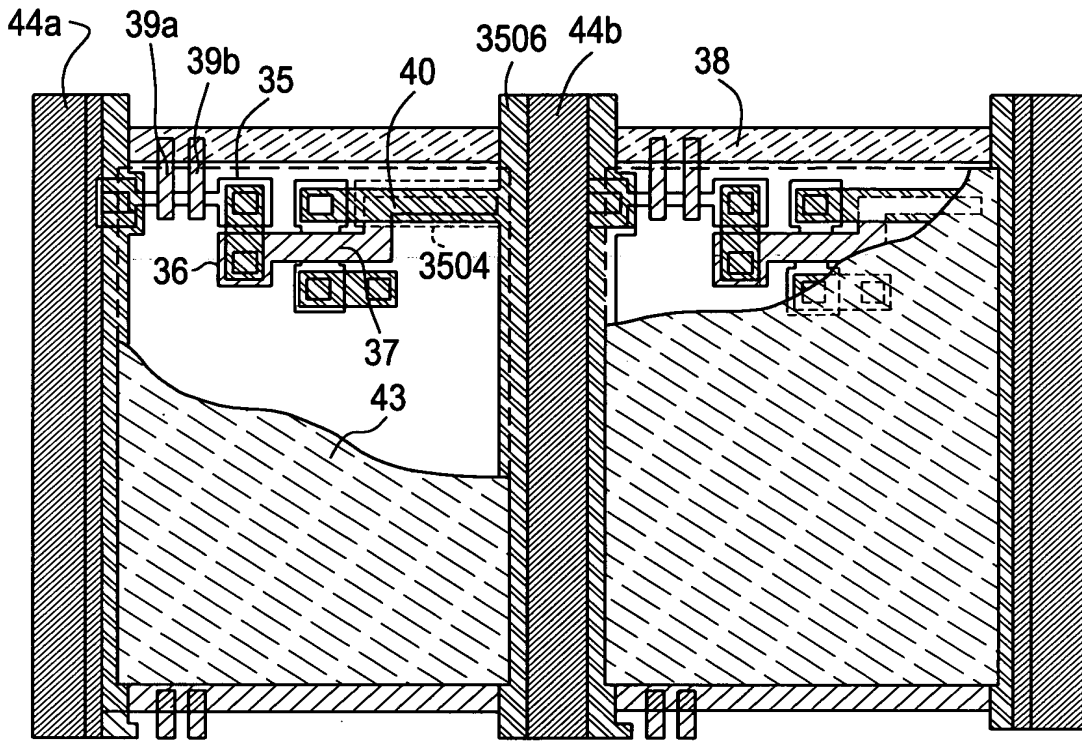


FIG. 28B

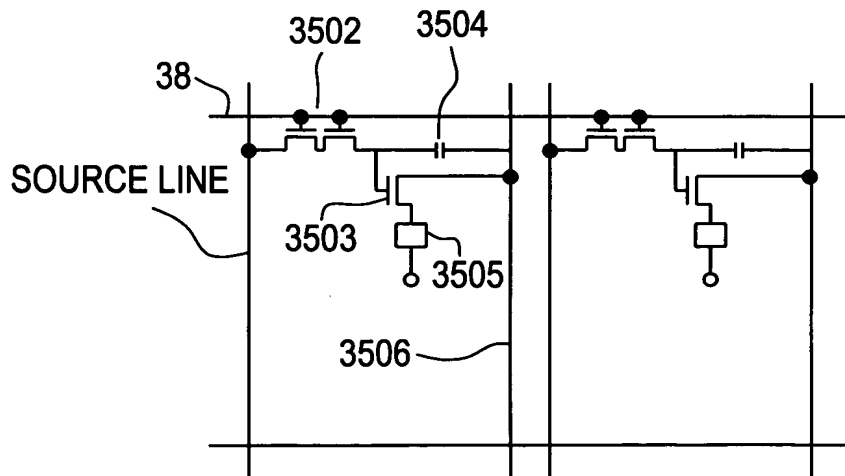


FIG. 29

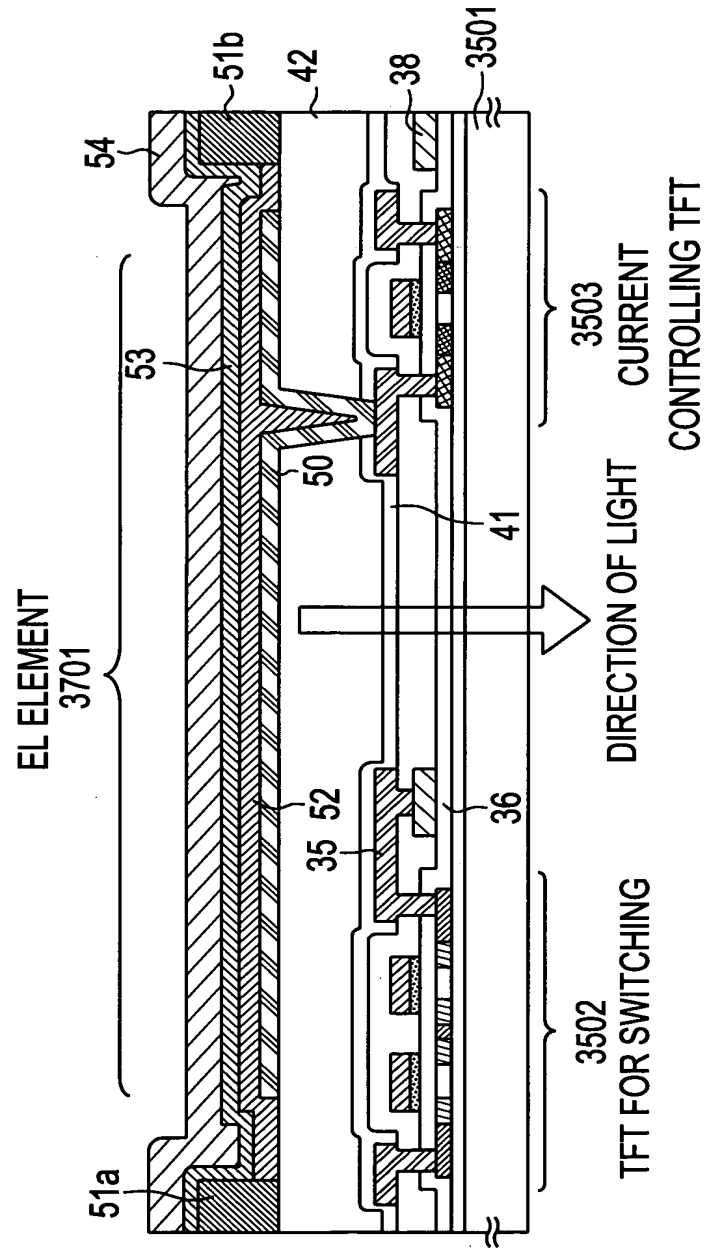


FIG. 30A

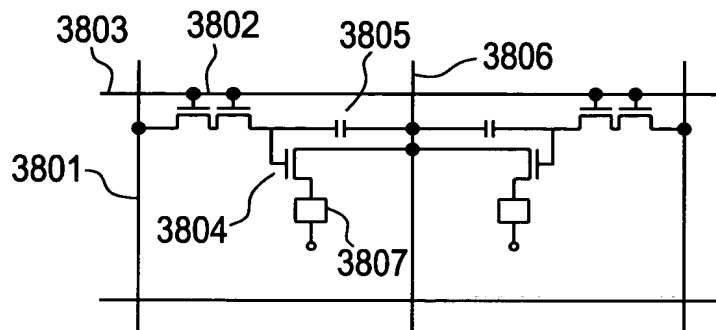


FIG. 30B

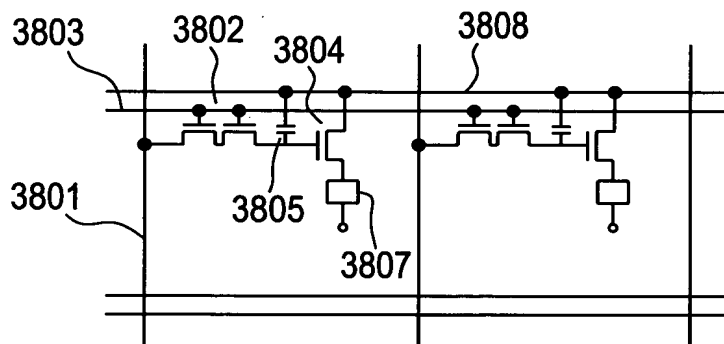


FIG. 30C

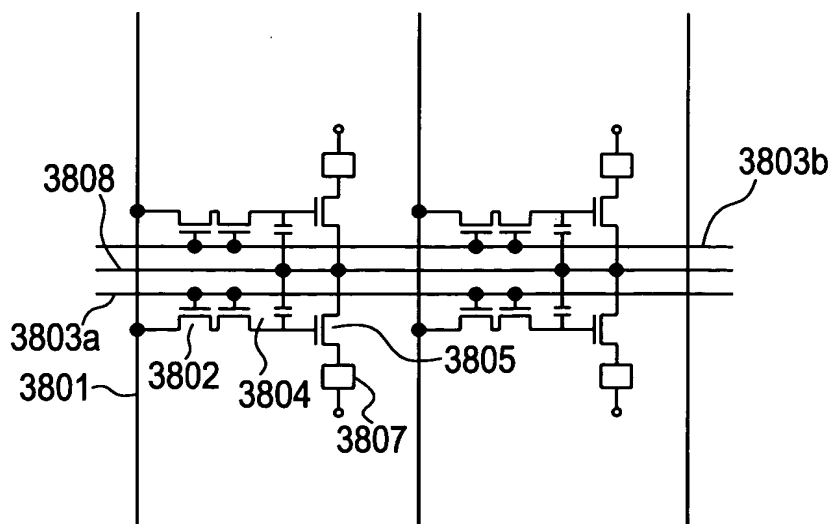


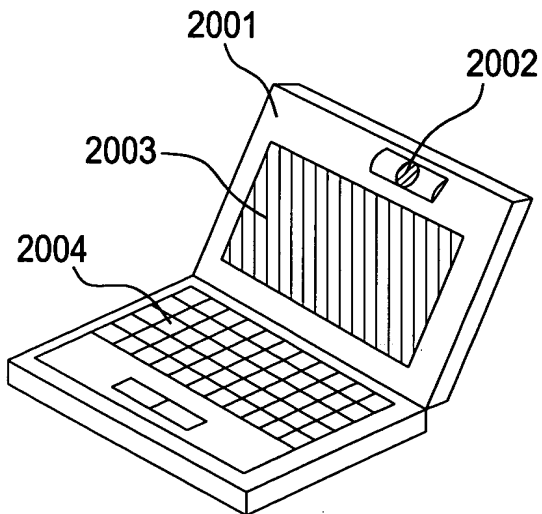
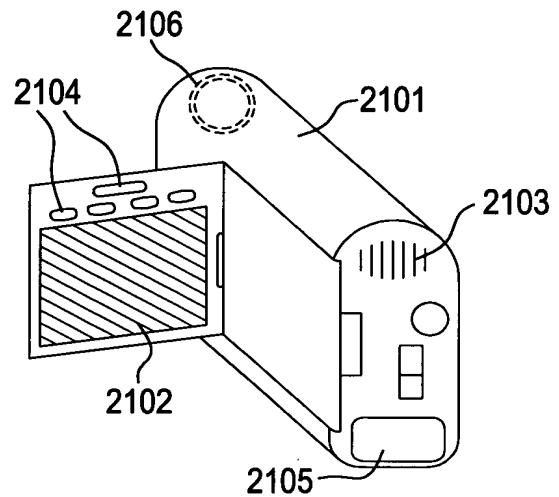
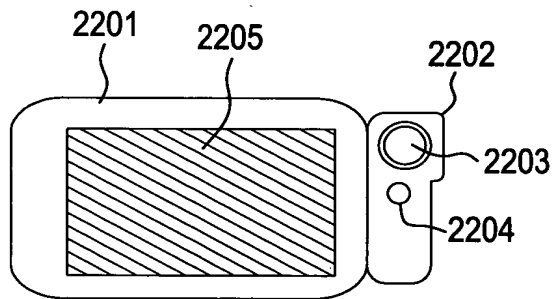
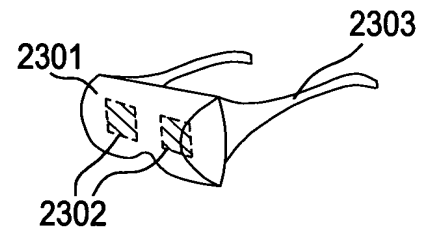
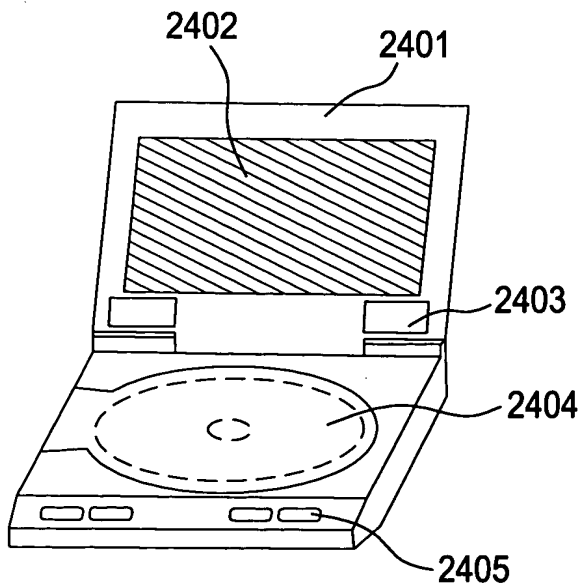
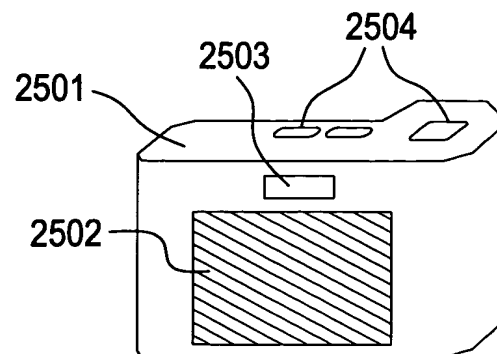
FIG. 31A**FIG. 31B****FIG. 31C****FIG. 31D****FIG. 31E****FIG. 31F**

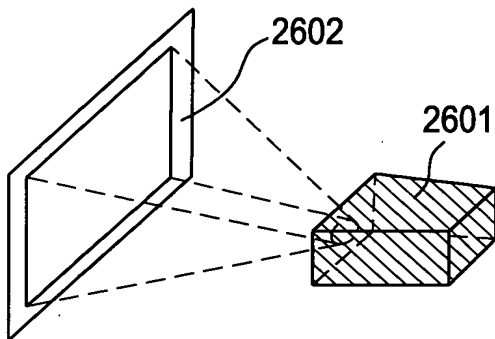
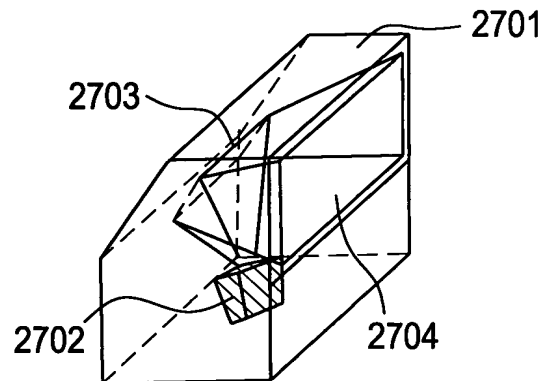
FIG. 32A**FIG. 32B**

FIG. 32C
PROJECTION UNIT
(THREE PLATE SYSTEM)

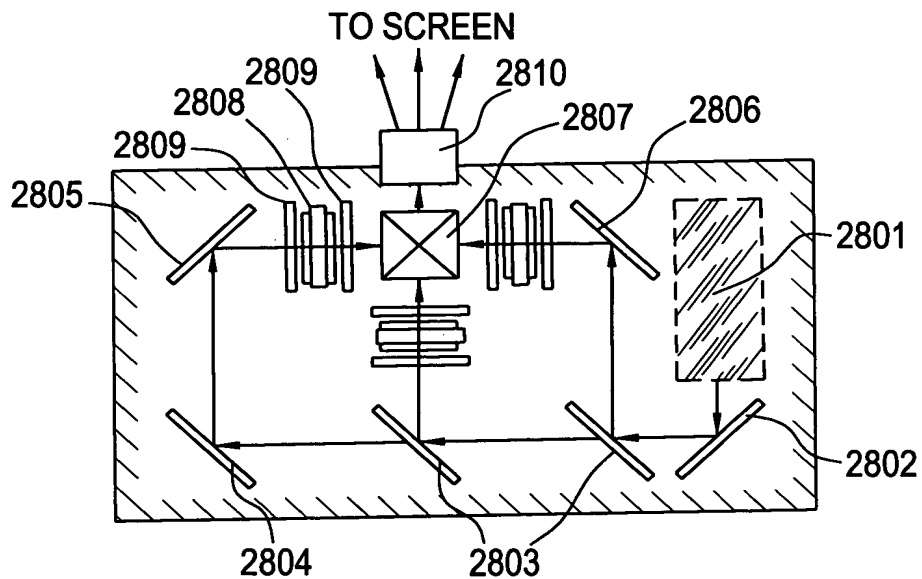
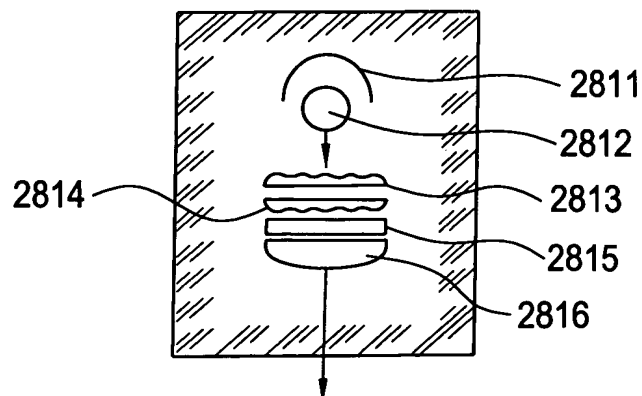


FIG. 32D
LIGHT SOURCE OPTICAL SYSTEM



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FIG. 33A

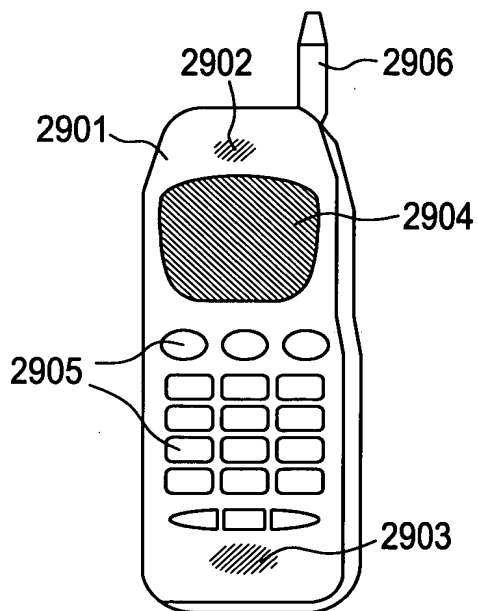


FIG. 33B

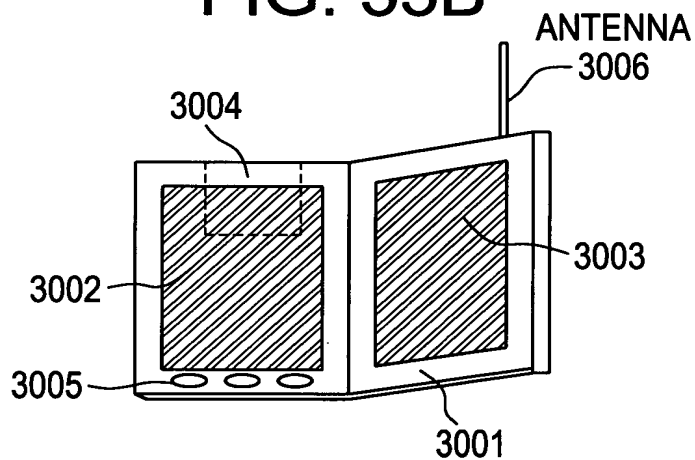


FIG. 33C

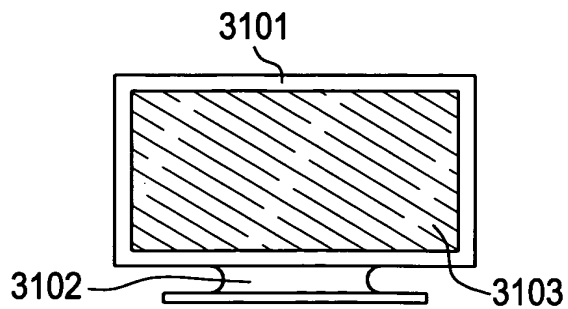


FIG. 34

ABSORPTION RATIO TO 55nm-THICK
NON-SINGLE CRYSTAL SILICON FILM

